

REMARKS

Claims 18-37 are pending in this application. Claims 18, 20, 28, 30 and 37 have each been amended. Claims 19 and 29 have been canceled. No claims have been added. Thus, claims 18, 20-28 and 30-37 remain subject to continued examination.

Anticipation Rejections:

Claims 18, 19, 24, 28 and 29 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,772,957 to Newton. Continued rejection on this basis is respectfully traversed and reconsideration is requested. Independent claims 18 and 28 have been amended to specifically recite that the piercing edge is a sharpened edge adapted to forcibly penetrate through the first member and into the second member upon application of a driving force to the head portion. As best understood, such features are not disclosed in the cited reference to Newton. Moreover each of the independent claims further recites that the adhesive is adapted to flow out of the interior cavity through radial passages during insertion of the piercing edge. As best understood, this feature is also not disclosed in the cited Newton reference which appears to rely on adhesive discharge after the rivet placement is complete. Accordingly, it is respectfully submitted that the outstanding anticipation rejection on the basis of Newton should not be maintained.

Obviousness Rejections:

Newton Alone:

Claims 21-23, 25-27, 31-36 and 37 stand rejected under 35 U.S.C. 103(a) as being obvious over Newton. Continued rejection on this basis is respectfully traversed and reconsideration is requested. As noted above, each of the independent claims has been amended to specifically recite that the piercing edge is a sharpened edge adapted to forcibly penetrate through the first member and into the second member upon application of a driving force to the head portion. Each of the independent claims further recites that the adhesive is adapted to flow out of the interior cavity through radial passages during insertion of the piercing edge. As best understood, these features are not taught or suggested by the cited Newton reference. To the

contrary Newton appears to contemplate that the adhesive discharge rivet is to be used only in combination with a separate drilling mandrel or by insertion into a preformed hole. See, Col. 1, lines 60-65. Certainly there is no teaching or suggestion of a rivet adapted to discharge adhesive during the dynamic insertion process. As noted at MPEP §2142, the prior art reference (or references when combined) must teach or suggest all claim limitations. Thus, it is respectfully submitted that Newton does not establish the requisite *prima facie* case of obviousness.

Bray in view of Newton:

Claims 18, 19, 21-29 and 31-37 have been rejected on the alternative grounds of being obvious over U.S. Patent 180,747 to Bray in view of Newton. In particular, the Office Action takes the position that at the time of the present invention it would have been obvious to provide the rivet of Bray with an adhesive and radial passages as disclosed in Newton to form a fluid tight joint as discussed in Newton. Applicants respectfully request reconsideration of this rejection.

Each of the independent claims requires that at least a portion of the adhesive is adapted to flow out of the interior cavity during insertion of the piercing edge. The Office Action discounts this recital as merely an intended use of which Newton would be capable. Applicants respectfully urge reconsideration of this point.

As best understood, in the systems disclosed in Newton, the adhesive is discharged from storage only after the rivet is in place in a desired orientation relative to the members of the structure (S) being joined. In Newton the adhesive is forced out by mandrel retraction after placement of the rivet is complete. See, Col. 3, line 53 through Col. 4, line 1. The pre-placed nature of the rivet in Newton prior to adhesive extrusion is confirmed by the statement at Col. 3, lines 8-13 wherein it is stated that the axial position of the barrel apertures preferably correspond to the interfaces of the structure (S) as shown in FIGS. 8 and 9.

The fact that Newton contemplates that the rivet is to be pre-placed prior to extrusion

reflects that the cited art provides no suggestion of either the ability or desirability of a rivet that delivers adhesive as it is being inserted to its final position. In fact, the delivery of adhesive across an exterior surface of the body portion of the rivet during insertion is actually contrary to the system advocated by Newton. Specifically, by extruding adhesive during insertion, the adhesive is caused to be placed between the rivet and the members being joined rather than being focused at the interface between the layers as advocated by Newton.

As regards the ability to modify the rivet of Bray to reach the claimed invention, it is respectfully submitted that the teachings in Newton regarding the desirability of aligning the extrusion apertures with the interface between the layers would weigh heavily against any motivation to make such a modification. That is, since Newton teaches only pre-placement of the rivet and the desirability of aligning the extrusion apertures and the layer interface, a system that ignores these features would represent a significant departure from the known art and would be contrary to the teachings of the cited art.

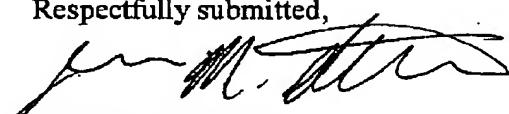
Claims 20 and 30 stand rejected under 35 U.S.C. 103(a) as being obvious over Newton or Bray as modified by Newton and further in view of U.S. Patent 5,044,852 to Sweeney. Continued rejection on this basis is respectfully traversed and reconsideration is requested. In particular, as set forth above, Applicants respectfully submit that Newton or Bray as modified by Newton fails to teach or suggest all elements of the base independent claims. Moreover any modification to reach the invention as recited in the base independent claims appears to be contrary to the teachings in Newton. Thus, the cited art does not appear to satisfy the standard to maintain an obviousness rejection.

CONCLUSION:

In light of the above amendments and remarks, Applicants respectfully request that all outstanding rejections be withdrawn and that the application be passed to issue. Applicants have attempted to address all outstanding issues. However, to any extent that one or more issues may remain, the Examiner is encouraged to contact the attorney of record in the hope that any such issue may be promptly addressed.

To any extent required for acceptance of this paper, an extension of time is hereby requested. Authorization is hereby provided to deduct any fee necessary for the acceptance of this paper from Deposit Account 50-1424.

Respectfully submitted,



James M. Robertson
Reg. No. 36,905
(864-583-0030)